

October 20, 2005

State Farm Insurance
Mr. Cody Perry, Claims Adjuster
1909 East Pass Rd.
Gulfport, MS 39507



Re: Hurricane Damage Assessment Investigation
Insured: Thomas & Pamela McIntosh
Date of Loss: 8-29-2005
SF Claim No. 24-Z178-602/24-BX-4847-7
FAEC Case No: 530-0088-05-25

Dear Mr. Perry,

Forensic Analysis & Engineering (FAEC) is pleased to provide the following report of our engineering investigation and evaluation of the reported damage to the residence located at 2558 S. Shore Drive in Biloxi, MS.

We initially received this assignment on October 4, 2005. FAEC performed a field investigation of the subject insured residence on October 18, 2005. In this assignment we were tasked to inspect the damage to the left front wall from the front porch to the dining area and determine if it was from wind, water or both.

This summary report is being submitted in fulfillment of our assignment in this matter.

BACKGROUND

On the morning of August 29, 2005, the Mississippi coast, including the city of Biloxi, was impacted by Hurricane Katrina, which was classified as a Category-4 hurricane when it made landfall.

FAEC performed a field investigation of the subject residence to determine if the damage to the front wall of the residence was caused by wind, floodwater or a combination of both. Mr. McIntosh was present during FAEC's inspection. During our on site examination of the subject damage, FAEC was able to complete our inspection.

SITE OBSERVATIONS

The following are observations made during FAEC's inspection of the structure:

- The home is oriented so that the front faces east towards S. Shore Dr. The back yard abuts Big Lake at the south end of the Tchoutacabouffa River.

FORENSIC ANALYSIS & ENGINEERING CORPORATION

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FORENSIC ENGINEERING, PRODUCT DEFECT ANALYSIS & ACCIDENT INVESTIGATIONS

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- There appears to be roof damage to the peak, north side and the southwest ridge area. The extent of this damage was not discernable as those areas had "Blue Roof" tarps covering them.
- The damage on the second floor consists primarily of floor damage.
- The damage to the first floor is extensive and includes floor, wall and ceiling damage.
- A witness, Mr. Craig Robertson, who is the owner's yardman, was at the site doing clean up work. He stated that prior to the storm he assisted in placing protective measures over the windows for the owners. He stated that shortly after the storm, he was at the house and had found that some of the upstairs doors, which led out to a balcony, had blown open and allowed water to enter the second floor which damaged the floor and ceiling below. Observations were consistent with his statement.
- There were abrasion marks on a decorative column and the inside of French doors that lead from the dining room of the first floor out to the front porch. When Mr. Robertson was questioned on the cause of these, he was unsure, but stated that there was a brick wall on the south end of that room that had blown into the house and there was lumber in that room after the storm. He also commented that part of a neighbor's roof from across the cul-de-sac was in front of the carport, which was immediately south of the subject residence and outside of the mentioned brick wall. He mentioned that another part of that roof was in front of the north end of the porch. Observations of the exterior porch columns, which also show signs of abrasion for a distance of about 4 ft. above the porch floor. This again is consistent with part of a roof structure rubbing against the columns while being carried by water. At the point where it was said that the debris stopped (north end of porch) several trees showed abrasion marks similar to the porch columns.
- The first floor elevation is estimated to be between 15 and 20 feet. Exact information was not available.
- Mr. Mindy Briscoe, the neighbor to the north of the subject house, stated that he had about 2-feet of water in his house. His floor elevation appears to be about 2 ft. higher than the subject house which would indicate that the water level in the subject house approached 4 ft above the first floor. An observation of light debris in nearby trees was consistent with this estimate of water level.
- The windows and doors at the back or west side of the house were not present. Their condition after the storm was not determined.



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- Observations of nearby properties indicate significant damage and there were numerous tree failures in the northwesterly direction.

CONCLUSIONS

Based on the information that has been presented to FAEC and evidence gleaned during our inspection, FORENSIC ANALYSIS & ENGINEERING CORPORATION has made the following conclusions concerning the damage to the structure:

- The tree failures in the northwesterly direction are the result of the winds out of the southeast from the approaching hurricane.
- There appears to have been damage to the structure by wind as evidenced by missing shingles on parts of the roof structure. Damage to the second story floor and first floor ceilings was predominately caused by wind and intruding rainwater.
- The damage to the first floor walls and floors appears to be predominately caused by rising water from the storm surge and waves.

House plans were not made available as to the construction of the left corner wall (entry from porch to the dining room). This corner has two walls. The east wall remains with French doors to the porch. The south wall was stated to be brick and it is unknown if doors were in that wall. The east doors would receive some protection from floating debris by the porch columns. It is understood that some lumber came in through the south wall into the dining room and that the bricks had fallen into the room. It is the opinion of FAEC that the damage to this wall was predominately due to waterborne debris hitting the wall.

The conclusions and opinions presented in this report are based on the results of FAEC's field investigation of the subject residence, as well as our analysis of the available wind and localized water level data and upon all of the other associated information that we have gathered during the course of our investigation efforts to date. If additional information or facts become available which materially affect these stated conclusions and opinions, then, FAEC reserves the right to amend or change its opinions and conclusions as needed.



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It has been our pleasure to perform this structural engineering analysis for you. We trust that our efforts will meet with your approval and that this report meets its intended purpose. Please call if you have any questions concerning this report or if I or any of FORENSIC ANALYSIS & ENGINEERING CORPORATION'S staff can be of further support.

Respectfully submitted,
FORENSIC ANALYSIS & ENGINEERING CORPORATION

John B. Kelly

John B. Kelly, P.E.
Principal Structural Engineer



As it is the practice of FAEC to emphasize and ensure the technical quality of its work through peer review, the content of this report has been reviewed by the undersigned to ensure that all stated conclusions and supporting facts are technically consistent and meet the requirements of current engineering and scientific principles.

FORENSIC ANALYSIS & ENGINEERING CORPORATION

Robert K. Kochan, President

Robert K. Kochan, ME, DABFET, FACFEI
Principal Technical Consultant